



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,111	03/16/2001	Steve B. McGowan	2207/10379	9369
7590 06/01/2005			EXAMINER	
KENYON & KENYON Suite 600 333 W. San Carlos, Street San Jose, CA 95110-2711			PHAN, TRI H	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 06/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/811,111

Applicant(s)

MCGOWAN, STEVE B.

Examiner

Tri H. Phan

Art Unit

2661

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment/Arguments

1. This Office Action is in response to the Response/Amendment filed on January 24th, 2005. Claims 1-27 are now pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-3, 5, 13-15 and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by **Trost et al.** (U.S.2002/0151275; hereinafter refer as '**Trost**').

- In regard to claims 1 and 13, **Trost** discloses in Figs. 1-16 and in the respective portions of the specification about the system and method for assembling and managing communication packet and transmission in the wireless communication system, e.g. 'Bluetooth networks' (For example see Figs. 1; page 1, para [0004]; page 2, para [0040]), between Bluetooth devices (For example see Figs. 1; page 2, para [0041]) by using Bluetooth radio frequency 'RF' connections. **Trost** also discloses about the input from the Bluetooth device, such as the keyboard ("peripheral device to encode data"; For example see Fig. 1), would be converted into L2CAP,

Art Unit: 2661

HCI and USB packets (“*encoding data into USB packet*”; For example see Figs. 1, 8; pages 4-5, paras [0070-0071]) and would then be formed into the over-the-air packets for transmitting through the transceiver (“*encoding USB packet into Bluetooth packet*” ; For example see Fig. 13; page 6, paras [0086-0087]) to/from the Bluetooth host, such as the personal computer (“*host device*”; For example see Fig. 1, 2A-C) for reassembling into USB packets (“*encoding/decoding into USB/Bluetooth packets*”; For example see Figs. 15-16; page 7, paras [0089-0091]).

- Regarding claims 2 and 14, in addition to features in base claims 1 and 13 (see rationales pertaining the rejection of base claims 1 and 13 discussed above), **Trost** also teaches about the method for adding header in the L2CAP/HCI transport layer (“*transaction header*”) to form the over-the-air packets, e.g. Bluetooth packets, for transmitting (For example see Figs. 13-14; pages 6-7, paras [0087-0088]).

- In regard to claims 3 and 15, in addition to features in base claims 1 and 13 (see rationales pertaining the rejection of base claims 1 and 13 discussed above), **Trost** further teaches about the Bluetooth devices (“*HID*”; For example the keyboard communicates with the computer through its Bluetooth transceiver) in the Bluetooth environment (For example see Fig. 1; page 2, para [0041]).

- Regarding claims 5 and 17, in addition to features in base claims 1 and 13 (see rationales pertaining the rejection of base claims 1 and 13 discussed above), **Trost** also teaches

Art Unit: 2661

about the channel ID in the L2CAP packets ("*channel identifier*"; For example see Fig. 13; page 6, para [0086]).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4, 6-12, 16 and 18-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Trost et al.** (U.S.2002/0151275).

- In regard to claims 4 and 16, **Trost** discloses all the subject matter of the claimed invention as discussed in part 3 above of this Office action, including the system and method for assembling and managing communication packet and transmission in the wireless communication system, e.g. 'Bluetooth networks', between Bluetooth devices ("*HID*") by using Bluetooth radio frequency (see rationales pertaining the rejection of base claims 1 and 13 above). Though, **Trost** does disclose about the USB layer and packets (For example see pages 4-5, paras [0070-0071]), but not explicitly disclose about "*HID protocol*" as the type of protocol for USB protocol (which is defined in USB Rev. 1.1 and HID Version 1.1 of USB Implementors Forum, Inc. and Standard Group). Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to use the "*HID protocol*" as the specific type of

Art Unit: 2661

protocol for USB protocol as the matter of choices, which depends on the systems and engineering choices.

- Regarding claims 6-10 and 18-22, in addition to features in base claims 1 and 13 (see rationales pertaining the rejection of base claims 1 and 13 discussed above), **Trost** also discloses about the fragment for each connection via the L2CAP layer into segments and reassembling the USB packets into the HCI and over-the-air packets ("*baseband packets*"), e.g. Bluetooth packets (disclosed in the claimed inventions 6-7 and 18-19; For example see Figs. 13-14, 27; page 6, para [0086-0087], page 7, para [0090]); for transmitting between the Bluetooth devices ("*transmission from host to HID devices, and vice versa*"; For example see Fig. 1) as disclosed in the claimed inventions 10 and 22; wherein the size of the transmission packets are based on the Bluetooth packets types and length for segmenting and transmitting over the air ("*information in the L2CAP packet and the maximum transmission unit*"; For example see page 7, para [0092]; page 9, para [0116]; page 10, para [0133]; as disclosed in the claimed inventions 8-9 and 20-21). Though, **Trost** does not explicitly disclose about "*SAR module*"; but does disclose about the fragment for segmenting/reassembling packets via the segmenter of the L2CAP layer (For example see Figs. 13-14).

Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the "*SAR module*" into the **Trost**'s fragment of the L2CAP layer for segmenting and reassembling packets, as the specific module for segmentation and reassembly capabilities.

- In regard to claims 11-12 and 23-24, **Trost** further discloses about the receiving transmission data packet of the slave device, which based on the clock timing and address for each slave device (*"capable of recognizing data signal"*; For example see page 3, paras [0054-0059]; and about the ACK/NACK indicator in the ARQN bit in the Bluetooth packet header (*"capable of recognizing acknowledge/non- acknowledge signal"*; For example see page 4, paras [0060]; page 7, para [0092]).

- Regarding claim 25, **Trost** discloses in Figs. 1-16 and in the respective portions of the specification about the system and method for assembling and managing communication packet and transmission in the wireless communication system, e.g. 'Bluetooth networks' (For example see Figs. 1; page 1, para [0004]; page 2, para [0040]), between Bluetooth devices (For example see Figs. 1; page 2, para [0041]) by using Bluetooth radio frequency 'RF' connections. **Trost** also discloses about the input from the Bluetooth device, such as the keyboard (*"peripheral device to encode data"*; For example see Fig. 1), would be converted into L2CAP, HCI and USB packets (*"encoding data into USB packet"*; For example see Figs. 1, 8; pages 4-5, paras [0070-0071]) and would then be formed into the over-the-air packets for transmitting through the transceiver (*"encoding USB packet into Bluetooth packet"*; For example see Fig. 13; page 6, paras [0086-0087]) to/from the Bluetooth host, such as the personal computer (*"host device"*; For example see Fig. 1, 2A-C) for reassembling into USB packets (*"encoding/decoding into USB/Bluetooth packets"*; For example see Figs. 15-16; page 7, paras [0089-0091]). **Trost** also teaches about the method for adding header in the L2CAP/HCI transport layer (*"transaction header"*) to form the over-the-air packets, e.g. Bluetooth packets, for transmitting (For example

Art Unit: 2661

see Figs. 13-14; pages 6-7, paras [0087-0088]), about the channel ID in the L2CAP packets (“*channel identifier*”; For example see Fig. 13; page 6, para [0086]), and about the fragment for each connection via the L2CAP layer into segments and reassembling the USB packets into the HCI and over-the-air packets (“*baseband packets*”), e.g. Bluetooth packets (disclosed in the claimed inventions 6-7 and 18-19; For example see Figs. 13-14, 27; page 6, para [0086-0087], page 7, para [0090]); for transmitting between the Bluetooth devices (“*transmission from host to HID devices, and vice versa*”; For example see Fig. 1) as disclosed in the claimed inventions 10 and 22; wherein the size of the transmission packets (“*packet size*”) are based on the Bluetooth packets types and length for segmenting and transmitting over the air (“*information in the L2CAP packet and the maximum transmission unit*”; For example see page 7, para [0092]; page 9, para [0116]; page 10, para [0133]; as disclosed in the claimed inventions 8-9 and 20-21). Though, **Trost** does disclose about the USB layer and packets [For example see pages 4-5, paras [0070-0071]), but not explicitly disclose about “*HID protocol*” as the type of protocol for USB protocol (which is defined in USB Rev. 1.1 and HID Version 1.1 of USB Implementors Forum, Inc. and Standard Group); therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to use the “*HID protocol*” as the specific type of protocol for USB protocol as the matter of choices, which depends on the systems and engineering choices. **Trost** does not explicitly disclose about “*SAR module*”; but does disclose about the fragment for segmenting/reassembling packets via the segmenter of the L2CAP layer (For example see Figs. 13-14).

Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the “*SAR module*” into the **Trost**’s fragment of the

Art Unit: 2661

L2CAP layer for segmenting and reassembling packets, as the specific module for segmentation and reassembly capabilities.

- Regarding claims 26-27, **Trost** further discloses about the fragment for each connection via the L2CAP layer into segments and reassembling the USB packets into the HCI and over-the-air packets (“*baseband packets*”), e.g. Bluetooth packets (For example see Figs. 13-14, 27; page 6, para [0086-0087], page 7, para [0090]; as disclosed in the claimed inventions 26); for transmitting between the Bluetooth devices; wherein the size of the transmission packets (“*packet size*”) are based on the Bluetooth packets types and length for segmenting and transmitting over the air (“*information in the L2CAP packet and the maximum transmission unit*”; For example see page 7, para [0092]; page 9, para [0116]; page 10, para [0133]; as disclosed in the claimed invention 27). Though, **Trost** does not explicitly disclose about “*SAR module*”; but does disclose about the fragment for segmenting/reassembling packets via the segmenter of the L2CAP layer (For example see Figs. 13-14).

Therefore, it would have been obvious to the person of ordinary skill in the art at the time of the invention was made to implement the “*SAR module*” into the **Trost**’s fragment of the L2CAP layer for segmenting and reassembling packets, as the specific module for segmentation and reassembly capabilities.

Response to Arguments

6. Applicant's arguments filed on January 24th, 2005 have been fully considered but they are not persuasive.

Art Unit: 2661

Regarding claims 1, 13 and 25, Applicant mainly argues that **Trost** fails to disclose about the “*USB packet is encoded using the Bluetooth protocol to form the Bluetooth packet*” for transmission between the host device and the peripheral device. Examiner respectfully disagrees. **Trost** does disclose the ‘USB packets’ are assembling into HCI packets, which then be formed into the over-the-air packets and sent out over the Bluetooth radio, e.g. ‘Bluetooth packets’, (see Figs. 8, 13; paras [0070-0071], para [0087]) through the Bluetooth baseband of the Bluetooth device (see Figs. 2A-C, 15; paras [0089-0090]), where the Bluetooth packet and protocol are disclosed in paras [0060], [0068]. Therefore, Examiner concludes that **Trost** teaches the arguable feature.

Claims 2-12, 14-24 and 26-27 are rejected as in Part 3 and 5 of the Office action above and by virtue of their dependence from claims 1, 13 and 25.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Roukbi et al. (U.S.6,779,185) and **Kobayashi** (U.S.6,633,759) are all cited to show devices and methods for improving communication architectures between the wireless host and devices, which are considered pertinent to the claimed invention.

8. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2661

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tri H. Phan whose telephone number is (571)272-3074. The examiner can normally be reached on M-F (8:00-4:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T. Nguyen can be reached on (571)272-3126.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703)872-9306

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor.

Art Unit: 2661

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703)305-3900.

A handwritten signature in black ink, appearing to read 'Tri H. Phan', with a long horizontal stroke extending to the left.

Tri H. Phan
May 26, 2005

A handwritten signature in black ink, appearing to read 'Brian Nguyen', with a long horizontal stroke extending to the right.

BRIAN NGUYEN
PRIMARY EXAMINER